

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) An isolated **CDK4-binding** peptide comprising:
Tyr-Ser-Gly-Pro-Pro-Xaa₁-Xaa₂-Xaa₃-Arg-Arg-Xaa₄-Asn-Xaa₅-Tyr-Xaa₆ (**SEQ ID NO: 1**)
wherein Xaa₁= Cys or Ser; Xaa₂= Ser or Gly; Xaa₃= Ser, Ala or Pro; Xaa₄=Arg or Gln; Xaa₅=
Ser, Cys or Gly; and Xaa₆=Asp or Glu;
wherein the isolated peptide does not include a bHLH domain;
wherein the isolated peptide binds cyclin dependent kinase 4.
2. (Canceled)
3. (Currently Amended) A fusion protein comprising:
 - (a) a **CDK4-binding** peptide comprising Tyr-Ser-Gly-Pro-Pro-Xaa₁-Xaa₂-Xaa₃-Arg-Arg-Xaa₄-Asn-Xaa₅-Tyr-Xaa₆ (**SEQ ID NO: 1**) wherein Xaa₁= Cys or Ser; Xaa₂= Ser or Gly; Xaa₃= Ser, Ala or Pro; Xaa₄=Arg or Gln; Xaa₅= Ser, Cys or Gly; and Xaa₆=Asp or Glu; wherein the peptide binds cyclin dependent kinase 4 and
 - (b) a heterologous amino acid sequence.
4. (Original) The fusion protein of claim 3 wherein the heterologous amino acid sequence comprises a nuclear localization signal.
5. (Currently amended) The fusion protein of claim 4 wherein the **CDK4-binding** peptide is at the C-terminus of the fusion protein.
6. (Withdrawn) A nucleotide sequence encoding a CDK4 binding peptide, wherein the CDK4 binding peptide comprises:
Tyr-Ser-Gly-Pro-Pro-Xaa₁-Xaa₂-Xaa₃-Arg-Arg-Xaa₄-Asn-Xaa₅-Tyr-Xaa₆

wherein Xaa₁= Cys or Ser; Xaa₂= Ser or Gly; Xaa₃= Ser, Ala or Pro; Xaa₄=Arg or Gln; Xaa₅= Ser, Cys or Gly; and Xaa₆=Asp or Glu.

7. (Withdrawn) The nucleotide sequence of claim 6, wherein the nucleotide sequence is a DNA sequence.

8. (Withdrawn) A method of inhibiting cell growth, comprising:
administering to a patient a CDK4 binding peptide comprising:

Tyr-Ser-Gly-Pro-Pro-Xaa₁-Xaa₂-Xaa₃-Arg-Arg-Xaa₄-Asn-Xaa₅-Tyr-Xaa₆

wherein Xaa₁= Cys or Ser; Xaa₂= Ser or Gly; Xaa₃= Ser, Ala or Pro; Xaa₄=Arg or Gln; Xaa₅= Ser, Cys or Gly; and Xaa₆=Asp or Glu in an amount effective to inhibit cell growth.

9. (Withdrawn) A method of inhibiting the activity of CDK4 comprising:
contacting CDK4 with a CDK4 binding peptide comprising:

Tyr-Ser-Gly-Pro-Pro-Xaa₁-Xaa₂-Xaa₃-Arg-Arg-Xaa₄-Asn-Xaa₅-Tyr-Xaa₆

wherein Xaa₁= Cys or Ser; Xaa₂= Ser or Gly; Xaa₃= Ser, Ala or Pro; Xaa₄=Arg or Gln; Xaa₅= Ser, Cys or Gly; and Xaa₆=Asp or Glu in an amount effective to inhibit the activity of CDK4.

10. (New) The isolated peptide of claim 1, wherein Xaa₁=Ser, Xaa₂=Gly, Xaa₃=Ala, Xaa₄=Arg, Xaa₅=Cys, and Xaa₆=Glu.

11. (New) The fusion protein of claim 3, wherein Xaa₁=Ser, Xaa₂=Gly, Xaa₃=Ala, Xaa₄=Arg, Xaa₅=Cys, and Xaa₆=Glu.